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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, KEVIN M

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 11/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/032,863

Applicant(s)

GRIGOR ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24,29-33 and 38-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24,29-33 and 38-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's remarks filed on 3/12/2002 are entered. However, the claims 24, 29-33, 38-55 are maintained.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 24, 29-33 and 38-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kou (US 5,874,928) in view of Zenda (US 5,559,525).

As to claims 24 and 29-32, Kou teaches a video graphics processing circuit 10, host computer 12 consists of a processing unit, display memory 36 and frame buffer 48 corresponding to the claimed a plurality of screen memories (figure 2), host computer 12 consists of a processing unit, video buffer 38, write buffer 45, and read buffer 50 corresponding to the claimed a digital storage medium and memory stores programming instructions (figure 2, column 4, lines 64-67), which includes host computer 12 to receive, manipulate, and store the graphics data is ready to be converted into video signals which can be used to drive the display 18a-18n CRT and LCD (figure 1, column 6, lines 20-26). It would have been obvious to a person of ordinary skill in the art to recognize that Kou discloses as recited in claims 24 (a) "receive display preferences regarding at least one of a multiple displays as claimed.

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Therefore, Kou teaches all of the claimed limitation of claim 24, except for claim 24 (b) and claim 24 (c). However, Zenda (5,559,525) teaches a portable computer control system which includes keyboard KB (figure 23A, col. 14, lines 24-32), the expansion slot of the computer corresponding to the claimed the coupling controller (see fig. 2A, 2B, col. 7, lines 34-38), the entire configuration of the computer (column 6, lines 45) corresponding to the configuration properties of the claimed. Zenda (5,559,525) teaches the first display controller 87 is incorporated (figure 3A, column 7, lines 45) and outputs display data P7-0 to be connected RAMDAC 93 and displayed on the color LCD panel 91 (figure 3A column 7, lines 46-67), the second display controller 109 outputs display data to be connected RAMDAC 111 and displayed on the color CRT display unit 107 (figure 3A, column 9, lines 13-15) corresponding to the claimed the plurality of screen memory, a first display controller 87 and a second display controller 109 (figure 3A) corresponding the claimed a plurality of display drivers. It would have been obvious to a person of ordinary skill in the art to recognize that Kou discloses as recited in claims 24 (b) and claim 24 (c) as claimed (by virtue of the operation described at col. 7, lines 31-67 to col. 8, lines 1-56). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to provide the additional keyboard taught by Zenda in the host computer for multiple display of Kou's system because this would allow the user to select two or more display devices.

As to claims 33 and 38-41, Kou discloses a computer control system which inherently includes a digital storage medium for storing programming instruction as

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recited in claim 33 "first means, second means, third means and fourth means for storing programming instructions... the plurality of screen memories" as claimed.

As to claims 42-48, Kou teaches a video graphics processing circuit 10, host computer 12 consists of a processing unit, display memory 36 and frame buffer 48 corresponding to the claimed a plurality of screen memories (figure 2), host computer 12 consists of a processing unit, video buffer 38, write buffer 45, and read buffer 50 corresponding to the claimed a digital storage medium and memory stores programming instructions (figure 2, column 4, lines 64-67), which includes host computer 12 to receive, manipulate, and store the graphics data is ready to be converted into video signals which can be used to drive the display 18a-18n CRT and LCD (figure 1, column 6, lines 20-26). It would have been obvious to a person of ordinary skill in the art to recognize that Kou discloses as recited in claims 24 (a) "receive display preferences regarding at least one of a multiple displays as claimed. Therefore, Kou teaches all of the claimed limitation of claim 42, except for coupling module and a coupling controller. However, Zenda (5,559,525) teaches a switch circuit (93, 97,101, ZENSEN), connected to the first graphics subsystem (87, 93), the connectors (103,105) and the second graphics subsystem (109, 111), for supplying the data from either the first graphics subsystem or second graphics subsystems to the flat panel display unit means (91, 95); wherein the switch circuit (93, 97,101, ZENSEN) supplies the data from the second graphics subsystem (109-113) to the flat panel display unit means (91, 95) when the second graphics subsystem (109-113) is connected to the portable computer (see col. 3, lines 9-19). It would have been obvious

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to one of ordinary skill in the art at the time of the claimed invention to provide a switch circuit taught by Zenda in the multi display Kou's system in order to switch the operation of the first graphics subsystem to that of the second graphics subsystem or vice versa (see abstract of Zenda).

As to claims 49-55, Zenda (5,559,525) teaches a switch circuit (93, 97,101, ZENSEN), connected to the first graphics subsystem (87, 93), the connectors (103,105) and the second graphics subsystem (109, 111), for supplying the data from either the first graphics subsystem or second graphics subsystems to the flat panel display unit means (91, 95); wherein the switch circuit (93, 97,101, ZENSEN) supplies the data from the second graphics subsystem (109-113) to the flat panel display unit means (91, 95) when the second graphics subsystem (109-113) is connected to the portable computer (see col. 3, lines 9-19). It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Zenda discloses the images, which defined by data, and signals supplied from the different graphics subsystem can be displayed on a flat panel display unit switchingly or alternatively. Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, and representative devices shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents (see col. 15, lines 6-15 of Zenda).

4. Claims 24, 29-33 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caine (US 5,361,078).

As to claims 24 and 29-32, Caine teaches a plurality of display cards 50 corresponding to the claimed a plurality of display controllers (figure 2), the four SRAMs 22A to 22D (a plurality of screen memories) are assigned to four video channels and connected to four corresponding video drivers 24A to 24D (a plurality of display controllers) (col. 2, lines 53-55), the status register 36 corresponding to the claimed a coupling controller (col. 3, lines 7-11). Caine further teaches a host computer 10 and a keyboard 12 corresponding to the claimed a processing unit (col. 3, lines 1-6) to (a) receive display preferences regarding at least one of a multiple displays; (b) determine whether the display preferences can be fulfilled in observance of at least one of: configurationfulfilled; and (c) configure the computing systemwhen the current configuration can be reconfigured. Regardless of such considerations, it will be appreciated that the number of images stored, how they are sequenced and whether and how the displayed information on the screws relates from screen to screen are all under control of the host computer, more especially via the status register or registers 36 (col. 6, lines 16-21). It would have been obvious to a person of ordinary skill in the art to recognize that Caine discloses as recited in claim 24 (a), claim 24 (b) and claim 24 (c) as claimed (by virtue of the operation described at col. 2, lines 21-68 to col. 3, lines 1-68)

As to claims 33 and 38-41, Caine teaches a host computer 10 including internal memory and hard drive and floppy disc. It would have been obvious to a person of ordinary skill in the art to recognize that Caine discloses a digital storage medium for

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storing programming instructions of first means, second means, third means and fourth means (by virtue of the operation described at col. 2, lines 21-24).

5. Claims 42-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caine (US 5,361,078) in view of Zenda (US 5,559,525).

As to claims 42-48, Caine teaches all of the claimed limitations of claim 42, except for coupling module and a coupling controller. However, Zenda teaches Zenda teaches an analog switch 97 (a coupling module) receives the control signals LP, FP, PCLK, and WCLK from the first display controller 87, and outputs them when the ZENSEN signal is at high level. The output terminals of the analog switch 97 are set in a high impedance state when the ZENSEN signal is at low level. The control signals supplied from the analog switch 97 are wired-ORed with control signals supplied from the Z connector 105, and are supplied to the color LCD controller 95 (col. 8, lines 20-27). It would have been obvious to a person of ordinary skill in the art to provide an analog switch 97 taught by Zenda in the multi display of Caine's system because this would allow the user to set up and select the different resolution of the multiple display screen.

As to claims 49-55, Zenda teaches a switch circuit (93, 97,101, ZENSEN), connected to the first graphics subsystem (87, 93), the connectors (103,105) and the second graphics subsystem (109, 111), for supplying the data from either the first graphics subsystem or second graphics subsystems to the flat panel display unit means (91, 95); wherein the switch circuit (93, 97,101, ZENSEN) supplies the data from the second graphics subsystem (109-113) to the flat panel display unit means (91, 95)

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when the second graphics subsystem (109-113) is connected to the portable computer (see col. 3, lines 9-19). It would have been obvious to a person of ordinary skill in the art at the time of the invention to recognize that Zenda discloses the images, which defined by data, and signals supplied from the different graphics subsystem can be displayed on a flat panel display unit switchingly or alternatively. Additional advantages and modifications will readily occur to those skilled in the art. Therefore, the invention in its broader aspects is not limited to the specific details, and representative devices shown and described herein. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents (see col. 15, lines 6-15 of Zenda).

Response to Arguments

6. Applicant's arguments filed 6/4/2001 have been fully considered but they are not persuasive.

In response to applicant's argument that claim 24 and 29-33 recite "a coupling controller of the processing unit to (a) receive display preferences regarding at least one of a multiple displays; (b) determine whether the display preferences can be fulfilled in observance of at least one of: configuration properties of the at least one of the multiple displays and configuration properties of a computing system, the coupling controller determining whether a current configuration of the multiple displays to the computing system can be reconfigured such that the display preferences can be fulfilled while maintaining effective configuration of the current configuration when the display preferences cannot be fulfilled; and (c) configure the computing system and the at least

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one of the multiple displays in accordance with the display preferences when the display preferences can be fulfilled, and reconfigure operable coupling of the multiple displays to the computing system such that the at least one of the multiple displays is configured in accordance with the display preferences when the current configuration can be reconfigured;

the memory storing further programming instructions: that cause..." This argument is not persuasive because Kou and Zenda teach all of the claimed limitations. Zenda's invention teaches "analog switch 97 and selector 113 are controlled by the Vcc and register 101 (see figure 3A, col. 20-34) to receive the display image has a resolution of 640x400 dots or 720x400 dots (figure 12A to 12D, col. 11, lines 4-8), the display image has a resolution of 640x350 dots or 720x350 dots (display preferences as claimed, see figure 17A to 17D, col. 11, lines 38-42)

determine whether the display preferences can be fulfilled in observance of at least one of configure properties relying in the teaching of Zenda "the selector 113, in response to the changeover signal 115 supplied from the second display controller 109, selects (1) either the digital color data supplied from the RAMDAC 111 or the digital color data supplied from the second display controller 109, (2) either the analog video signals supplied from the RAMDAC 111 or the analog video signals from the second display controller 109, and (3) either the control signals coming from the first display controller 87 or the control signals transmitted from the second display controller 109 (col. 9, lines 30-40)"

the memory storing further programming instructions: that cause... relying in the teaching of Zenda "the RAMDAC 111 has a configuration similar to that of the RAMDAC 93. The RAMDAC 111 converts the display data P7-0 transmitted from the first display controller 87 into digital color data in response to the display enable signal FR and the prime clock pulse signal PCLK, and supplies digital color data R5-0, G5-0, B5-0 to the selector 113. Further, the RAMDAC 111 converts the digital color data to analog video signals by DACs, which are supplied to the selector 113 (col. 9, line 18-26)."

These arguments are not persuasive because one skill in the art to recognize clearly the analog switch 97 and selector 113 are controlled by the Vcc and register 101 of Zenda teaching obviates the coupling module 28 is controlled by coupling controller 26 that configured and reconfigured the CRT display and LCD display (see col. 8, line 60 through col. 9, col. 10, line 53).

In response to applicant's argument that claim 24 and 29-33 recite "a digital storage medium for storing programming instructions that, when executed by a processing unit, cause the processing unit to configure multiple displays associated with a computing system, the digital storage medium comprises: first means, second means, third means, and fourth means." This argument is not persuasive because Zenda's invention teaches "a central processing unit (CPU) for controlling the entire system of the computer (see col. 6, line 45 through col. 7, line 30)."

In response to applicant's argument that claim 49-55 recite "a video graphics processing apparatus that configures a plurality of displays associated with a computer system, the apparatus comprising: screen memory, a plurality of display controller

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included on a single video graphic card, a plurality of display drivers, a coupling module, and a coupling controller.” This argument is not persuasive because Caine’s invention teaches “the display card 50 (a single video graphic card as claimed) refers to the circuit shown in figure 1 without the host and associated keyboard, the co-processor and the master sync generator. In figure 2 there are only four monitors making up the display (col. 5, lines 5-9). A plurality of screen memory 22A, 22B, 22C, and 22D, a plurality of video drivers (col. 2, lines 53-55).” Zenda’s invention teaches a first display controller 87 and color LCD controller 95 (figure 3A, col. 8, lines 1-6). analog switch 97 and selector 113 (coupling module as claimed) are controlled by the Vcc and register 101 (coupling controller as claimed, see figure 3A, col. 20-34).”

In response to applicant’s argument that claims 24, 29-33 and 38-41 recite “a coupling controller of the processing unit... the memory storing further programming instructions: that cause...” The status register of Caine is not coupled to a coupling module for controlling which screen memory is coupled to which display driver or display controller (page 4, lines 17-19). This argument is not persuasive because Caine’s invention teaches the status register 36 is common to all channels and is moreover at the same address on all boards so all 24 channels are treated identically so far as the status register bits are concerned. Obviously, the six boards could have separately addressed status registers and, on any given board, there could be separately addressed status registers for each channel (col. 6, lines 8-15).

In cases where the system is to be used for displaying departure times or similar passenger information the four channel memory segments 22A to 22D will be loaded

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with text, that is, with the appropriate selection of pixel colours the display will appear as text on a background. Naturally, the colour of both the text and the background can be chosen. In such an embodiment, the overlay text may still be retained to display additional text, for example message and the like. Alternatively the memory segment SRAM 22E may contain picture information. It will be appreciated that the system may be manipulated to display whatever is desired by the user and the invention is not limited to any particular arrangement of text and picture information in the SRAMs 22A to 22E (the memory storing further programming instructions, col. 6, lines 32-46).

For these reasons, the rejections based on Kou, Zenda and Caine have been maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on M-T (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:


(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Examiner
Art Unit 2674

KN
November 2, 2002



RICHARD HJERPE
SUPERVISOR, PATENT EXAMINER
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